

Appl. No. 10/781,336  
Amdt. dated October 24, 2005  
Reply to Office Action of July 27, 2005

Atty. Ref. 81912.0017  
Customer No. 26021

**Remarks/Arugments**

Reconsideration of this application is requested.

**Claim Status**

Claims 9, 10 and 12-32 were previously presented and remain pending.  
Claims 9 and 12 are amended.

**Claim Rejections – 35 USC 112 – First Paragraph**

Claims 16, 17, 22 and 23 are rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. In particular, the Action asserts that the specification does not disclose large protrusions higher in height than the small protrusions (claims 16 and 17) or large protrusions higher in height and wider in width than the small protrusions (claims 22 and 23).

In response, the Examiner's attention is directed to applicant's Fig. 8D. In Fig. 8D, it is clear that protrusion 18a is higher in height than protrusion 18b and wider in width than protrusion 18b. In view thereof, applicant amends the specification to be consistent with the drawings. In particular, the following paragraph is inserted after the paragraph that ends on page 20, line 13:

"As shown in Fig. 8D, protrusion 18a is higher in height and wider in width than protrusion 18b."

Amendment of the specification to be consistent with the drawings is permissible and does not constitute addition of new matter. Since claims 16, 17, 22 and 23 are supported by the drawings, and the specification as amended to be consistent with the drawings, the rejection under 35 USC 112, first paragraph, should be withdrawn.

**Claim Rejections -35 USC 112 – Second Paragraph**

Claims 9, 10 and 12-32 are rejected under 35 USC 112, second paragraph, as indefinite.

In claim 9, the Action asserts that the phrase "provided with protrusions having fine recesses formed on a surface thereof" is indefinite because it is not clear

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whether there is only a recess or a plurality of recesses formed on each of the protrusions. In response, claim 9 is amended to clarify that the fine recesses are formed on a surface *of the protrusions*. Applicant traverses any remaining lack of definiteness that is asserted,

The protrusions of the claimed invention are provided with fine recesses formed on a surface of the protrusions to increase contact areas with an ohmic contact layer and to reduce contact resistance between the protrusions and the ohmic contact layer. Although it is preferable to increase such contact areas with the ohmic contact layer by providing each protrusion with fine recesses, it is not always necessary to provide each of the protrusions with the fine recesses. This will be a matter of design choice as needed to comply with manufacturing and/or product requirements. Thus, applicant's claim 9 is clear and requires fine recesses (plural) formed on at least one surface (i.e., "a surface") of the protrusions, but not necessarily recesses formed on all protrusions.

In claim 10, the Action asserts that the phrase "provided with protrusions whose surface includes regions out of stoichiometric compositions" is indefinite because it is unclear whether each of the protrusions has surfaces including regions out of stoichiometric composition. Applicant respectfully traverses the rejection.

Each protrusion is not necessarily provided with a surface including regions out of stoichiometric compositions. Again, this will be a matter of design choice as needed to comply with manufacturing and/or product requirements. The language of claim 10 is clear - there must be protrusions (plural) whose surface includes regions out of stoichiometric composition, but not necessarily every protrusion will have a surface with such composition.

In claim 12, the Action objects to the phrase "protrusions formed on a surface thereof" as being unclear as to what surface is being referred to. In response, claim 12 is amended to clarify that the protrusions are formed on *"a surface of the second conductive type nitride based semiconductor layer, said protrusions being provided with fine recesses formed on a surface of the protrusions"*.

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### Claim Rejections - 35 USC 102(b) and 103

Claims 9, 12, 13, 15, 18, 19 and 21 are rejected under 35 USC 102(b) as anticipated by Hayashi (JP 2002-016312). Claims 16, 22, 24, 25, 27, 29, 30 and 32 are rejected as obvious over Hayashi. Applicant respectfully traverses these rejections.

Independent claims 9 and 12 (as amended) require protrusions having fine recesses "*formed on a surface of the protrusions*". As seen in Hayashi's Fig. 7(f), enlarged at the end of the office action, there are no *fine* recesses formed on the *surfaces* of the protrusions. There are large recesses formed between and separation the protrusions, but no recesses formed on the surfaces of the protrusions themselves. Thus, Hayashi's structure does not provide the advantages provided by applicant's claimed configuration of increasing contact areas with an ohmic contact layer and reducing contact resistance between the protrusions and the contact layer.

Since Hayashi does not disclose or suggest each and every element of claims 9 and 12, as amended, it cannot anticipate or render obvious those claims or claims dependent thereon. The rejections under 35 USC 102(b) and 103 should be withdrawn.

### Allowable Subject Matter

The indication of allowable subject matter in claim 10 is noted and appreciated.

### Conclusion

This application is now believed to be in condition for allowance. The Examiner is invited to telephone the undersigned to resolve any issues that remain after entry of this amendment.

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Atty. Ref. 81912.0017  
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Any fees due in connection with this response may be charged to our Deposit  
Account No. 50-1314.

Respectfully submitted,  
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